Evaluating the Impact of World Bank Structural Adjustment Lending: 1980–87

by Jane Harrigan and Paul Mosley

This article attempts to evaluate the World Bank's programme aid in the form of Structural Adjustment Loans with emphasis on the distinction between the influence of programme finance and the influence of the policy conditions attached to this finance. The rate of return on World Bank programme aid, measured in terms of the impact of GDP growth rates, is found to have been disappointing. The study also identifies a negative correlation between Structural Adjustment Loans and investment. It was also found that the Bank programme aid's strongest beneficial effect has been on the balance of payments current account, both via the stimulation of exports and via the curbing of imports.

I INTRODUCTION

An important change in the lending activities of development agencies over the past decade has been a shift from 'project' to 'programme' aid, that is, from the funding of specific development projects to injections of money designed to underpin programmes of policy and institutional reform by governments of developing countries. The World Bank has taken a leading role in this re-orientation of development aid through its provision of Structural and Sectoral Adjustment Loans (SALs and SECALs). The ratio of World Bank programme assistance to the Bank's total lending has risen, indeed, from near zero in 1978 to around 30 per cent in 1990 [*World Bank, 1990*].

Other bilateral and multilateral agencies, including the IMF through the provision of its Extended Fund Facilities, have also increased their involvement in programme lending activities. But whereas elaborate and sophisticated methodologies exist for the appraisal and evaluation of *projects*, no comparable methodology exists for the assessment of financial flows given in *programme* form. The purpose of this paper is to make a small contribution towards filling this gap.

This study attempts to measure the impact of the World Bank's programme aid in the form of SALs and SECALs, with particular emphasis on the distinction between the influence of programme finance and the influence of the policy conditions attached to this finance. It will be argued that the returns from Bank programme aid are rather disappointing, particularly when compared with the returns on traditional project lending activities. This suggests that European development agencies may have been prudent in resisting the trend towards rapid direct involvement

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in programme lending activities. It also suggests that European members of the Bank Group need to exert continued pressure to ensure that the effectiveness of the Bank's programme lending activities is constantly and comprehensively monitored and improved.

II ALTERNATIVE EVALUATION METHODS

Any evaluation of a past action necessitates three decisions regarding appropriate methodology: (i) choice of *criteria* of action; (ii) choice of a *procedure* which defines the nature of the links between the action and the criteria of evaluation and eliminates the influence of exogenous factors; (iii) the making of valid *inferences* from the results concerning the direction of causation and the applicability of those results to policy-makers in similar situations.

(i) Criteria for Assessment

The fundamental objectives of programme lending[1] are captured in the following rationales offered for the World Bank's structural adjustment lending:

> ... to provide quick-disbursing finance to support measures designed to strengthen recipient countries' balance without severely constraining demand in a manner that unnecessarily sets back economic and social development [*Landell-Mills, 1981: 17*].
>
> ... to facilitate the adjustment required to achieve sustainable growth and the mobilisation of external financing needed to support a country's adjustment efforts [*Michalopoulos, 1978. 8*].

Growth of GDP, growth of exports, improvement in the balance of payments, and generation of finance from alternative sources are all accepted by programme aid donors as valid criteria of evaluation, albeit with differences of emphasis, with the IMF giving most weight to short-term improvement in the balance of payments and the World Bank and bilateral donors giving most weight to long-term improvements in exports and GDP. What is more contentious is the weight to be given to distributional objectives. Although donor representatives have paid lip service to the impact of adjustment programmes on low-income groups, neither the formal statements signed between donors and individual countries suggest that these concerns represent major operational objectives of programme aid, for the World Bank or any other agency. Hence, we have chosen for our evaluation of programme aid the criteria advanced by its own sponsors, namely its impact on trade flows, the balance of payments, GDP growth and inflows of finance on market terms.

(ii) Evaluation Procedure

Any assessment of what happened to an evaluation variable in a given period is a comparison between what actually happened and some standard of performance or yardstick. Three yardsticks are available: (1) what was expected to happen during that period, that is, the planned

target; (2) what happened in a previous period; (3) some estimate of what would have happened in the absence of the influence being assessed. However, *planned values* (1) are an arbitrary yardstick. Often, as in the case of targets attached to World Bank SALs, they are simply optimistic guesses [*Mosley, 1987: Table 4, 6*] and even if they are derived from modelling work such work cannot predict exogenous events bearing on the economic outcomes (for example, trends in the terms of trade and weather conditions) with any reliability. In such a situation, economic performance which falls short of the targets may be cited as evidence of poor programme design or implementation when it is the choice of targets which is in fact at fault.

The '*before versus after*' method of evaluation[2] faces similar problems, since change over time in a target variable may be due to any number of exogenous influences which had nothing to do with the programme loan under analysis. This problem is particularly serious if one attempts to compare the periods immediately before and after the initiation of programme lending in the early 1980s, which featured two major oil crises, a serious drought in Sub-Saharan Africa, a world-wide depression, and widely fluctuating interest rates.

The method which affords most hope of separating out the influence of exogenous influences, and which is therefore used in this study, is the '*with versus without*' method,[3] in which what actually happened is contrasted with what, it is believed, would have happened in the absence of the programme loan. The evaluation hinges on a comparison between a 'treatment scenario' that is, the with programme aid case, and a 'control scenario', that is, the without programme aid case, and aims to eliminate the influence of exogenous factors by subjecting both cases to the same influences. The difficulty with this approach is that the control consists not of an actual measurable situation but rather of a hypothetical counterfactual situation which could have been expected to materialise in the absence of programme lending. Comparisons between the actual and the hypothetical 'without policy' outcome can be attempted either for a group of countries on a cross-section basis or for a single country on a time-series basis.

We have chosen the former approach in the following evaluation exercise. Supplementary single-country simulations of 'with' and 'without' programme aid scenarios can be found in the authors' work elsewhere [*Harrigan, 1988; Mosley, Harrigan and Toye, 1991. Ch. 8*].

(iii) Inference

Once results have been obtained from the chosen evaluation procedure there remains the problem of inference. Even though the results may expose a difference between the 'with' and 'without' programme aid countries, this is only necessary, but not sufficient, to prove that the programme aid caused the differences. The nature of causation between programme lending and the variables it is intended to influence is discussed during the presentation of our results, with various hypotheses being advanced regarding the possible nature of different causal links.[4]

In summary, we have chosen trends in key macro-economic variables as our criteria for the evaluation of World Bank programme lending, in line with the emphasis chosen by the aid donors themselves. As our procedure of evaluation we have chosen the 'with versus without' method in preference to the 'plan versus target' and the 'before versus after' methods. An aggregative 'with versus without' evaluation exercise is presented in section III in which a group of SAL recipient countries is compared with a group of non-recipient countries. These aggregative comparisons between programme and non-programme countries have been supplemented with regression work contained in section IV in which the influence of Bank and Fund programmes is separated and the impact of exogenous factors is quantified. The concluding section V summarises the results and their policy implications for future programme lending activities.

III AGGREGATE 'WITH VERSUS WITHOUT' EVALUATION

In this section we apply the aggregative 'with and without' method to the evaluation of World Bank Structural Adjustment Loans (SALs), which constituted the principal vehicle for the disbursement of conditional programme finance in the 1980s. The 'with' scenario is represented by a group of countries who have received one or more SALs since 1980 and the 'without' scenario by a control group of countries who have not received SAL packages. The criteria of evaluation used are the impact of SAL packages on GDP growth, investment, real export and import growth, and the balance of payments on current account. Trends in our chosen variables are compared between the SAL group and the Non-SAL group in order to assess the impact of both the SAL financial flows and SAL conditionality.

In all, 25 countries received SALs between 1980 and 1987 (Table 1). However, owing to lack of data, the following countries have been excluded from the 'with SAL' groups: Central African Republic; Gambia; Guinea; and Mauritius. South Korea has also been excluded on account of lack of data on Taiwan, the country paired with Korea as a member of the Non-SAL control group.

In selecting countries to form the 'without SAL' control group, a Non-SAL country has been paired with each SAL country. The objective of the pairing is to overcome the first problem associated with the aggregative 'with and without' method of evaluation, namely, the possibility that misleading results may arise if SAL countries are in some way unrepresentative of developing countries as a whole. In the following exercise, to ensure that like is being compared with like, countries receiving SALs have been paired with countries which experienced similar levels of GNP per capita and similar GDP growth rates in the pre-SAL period. The pairing also attempts to match countries with similar economic structures, taking into consideration factors such as the level of industrialisation, the prevalence of commercial agriculture, the degree of export concentration and the extent of State economic activity. In order to try to eliminate the

TABLE 1

STRUCTURAL ADJUSTMENT LOANS (APPROVED AS OF MAY 14 1987)

Country	Amounts ($m) IBRD	IDA	SFA/SJF(1)	Total	Board Approval	GDP in Board Approval Year ($ millions)	SAL disbursements as % of total disbursements
Bolivia	50 0			50 0	06/05/80	6 100	0 82
Burundi		15 0	16.2/19 3	50.5	05/22/86	1.090	4 63
CAR I		14 0	16.0/-	30 0	09/09/86	900	3.33
Chile I	250 0			250.0	10/22/85	16 000	1.56
Chile II	250 0			250 0	11/20/86	16,320	1.49
Costa Rica	80 0			80 0	04/16/85	3,810	2 10
Cote D'Ivoire I	150 0			150 0	11/24/81	8 670	1.73
Cote D'Ivoire II	250 7			250 7	07/05/83	7,090	3.54
Cote D'Ivoire III	250 0			250.0	06/03/86	7,320	3 47
Gambia I		5 0	11.5/ 4 15	21 0	08/26/86	NA	NA
Ghana		34 0	81 0/ -	115 0	04/14/87	NA	NA
Guinea		25 0	17 0/42.2	84.2	02/11/86	NA	NA
Guyana (2)	14 0	8 0		32.0	02/03/81	NA	NA
Jamaica I	76.2			76.2	03/23/82	3 180	2.40
Jamaica II	60 2			60 2	06/14/83	3,140	1 92
Jamaica III	55 0			55.0	11/20/84	2,380	2.31
Kenya I		55 0		55.0	03/25/80	5,990	0 92
Kenya II	60 9	70 0		130 9	07/01/82	5,340	2.45
Korea I	250 0			250 0	12/17/81	65 750	0.38
Korea II	300 0			300.0	11/08/83	76,640	0.39
Malawi I	45 0			45 0	06/25/81	1,420	3 17
Malawi II		55 0		55 0	12/20/83	1,330	4 14
Malawi III		30 0	40 0/39 1	109 1	12/19/85	970	11.25
Mauritius I	15 0			15 0	06/02/81	NA	NA
Mauritius II	40 0			40 0	12/08/83	NA	NA
Nepal		50 0		50.0	03/24/87	NA	NA
Niger		20.0	40 0/ -	60 0	02/18/86	2,080	2.88
Pakistan	60.0	80.0		140.0	06/01/82	24,660	0.57
Panama I	60.2			60.2	11/15/83	4,370	1.38
Panama II	100.0			100.0	12/11/86	5,120	1.95
Philippines I	200.0-			200.0	09/16/80	35,490	0.56
Philippines II	302.3			302.3	04/26/83	34,640	0 87
Senegal (2)	30 0	30.0	44.0/ 7.0	60.0	12/18/80	2,650	2.26
Senegal		20 0		71.0	02/04/86	3,740	1.90
Thailand I	150.0			150 0	03/02/82	36,790	0 41
Thailand II	175.5			175.5	03/31/83	40,430	0.43
Togo I		40 0	10.0/30.0	40 0	05/17/83	720	5.56
Togo II		27.8		67.8	05/30/85	700	9.69
Turkey I	200.0			275.0	03/25/80	53,820	0.51
& supplement	75.0				11/18/80		
Turkey II	300.0			300 0	05/12/81	53,910	0.56
Turkey III	304.8			304.5	05/27/82	49,980	0.61
Turkey IV	300 8			300.8	06/23/83	47,840	0.63
Turkey V	376.0			376.0	06/14/84	47,460	0.79
Yugoslavia	275.0			275.0	06/28/83	46,890	0.59

Notes.

(1) Special facility for Africa and Special Joint Financing

(2) Programme continued

TABLE 2

COMPARISON OF SAL GROUP AND NON-SAL CONTROL GROUP COUNTRIES

COUNTRY PAIRS	Change in Terms of Trade %pa 1975-81	Change in Terms of Trade %pa 1981-86	1976 GNP PER CAP (US$)	1981 GNP PER CAP. (US$)	Real GDP per Capita Growth Rate 1970-81 (%PA)
BOLIVIA	7.9	-8.0	390	600	1.7
COLOMBIA	0 6	3 7	630	1380	3 6
BURUNDI	NA	NA	120	230	1.3
RWANDA	-0.1	-4.3	110	250	1.8
CHILE	-7 4	-4 4	1040	2560	0.3
PERU	-6 4	-5.5	800	1170	0.5
COSTA RICA	-3.3	-0.5	1040	1430	2.4
HONDURAS	-5.7	-1.2	390	600	0.9
C.D'IVOIRE	-4.1	-1 4	610	1200	1 1
CAMEROON	-1 4	-1.4	290	880	4 0
GHANA	-2.2	-5.0	580	400	-3.2
ZAMBIA	-5,8	-4.7	440	600	-2.6
GUYANA	-8 2	-4.0	NA	720	0.5
EL SALVADOR	-5 2	-3.1	490	650	0.2
JAMAICA	-3.8	-2.6	1070	1180	-2.6
NICARAGUA	-6.0	-2.9	750	860	-3.0
KENYA	-3 1	-1.1	240	420	2.1
TANZANIA	-0.9	NA	180	280	0.8
MALAWI	-4.3	0.8	140	200	2.5
ZIMBABWE	-7.1	NA	550	870	-1.4
NEPAL	NA	NA	120	150	-0.5
BURMA	3 4	-4.2	120	190	2.6
NIGER	-3.1	-3.0	160	330	-0 1
MAURITANIA	-6.0	-1.3	340	460	-0.6
PAKISTAN	-5.6	-2.0	170	350	1.9
EGYPT	-2.9	-4.8	280	650	4 9
PANAMA	-2.9	-2.5	1310	1910	2.2
GUATAMALA	-5.8	-1.6	630	1140	2.3
PHILIPPINES	-4 8	-2.0	410	790	3.4
INDONESIA	6.9	-0.7	240	530	5.3
SENEGAL	-7 6	0.3	390	430	-0.7
SIERRA LEONE	-5.1	0.3	200	320	-0 8
THAILAND	-7 0	-1.9	380	770	4.6
MALAYSIA	-0.1	-6.3	860	1840	5.2
TOGO	-7.0	-3.5	260	380	0.7
BENIN	-4 6	-1.5	130	320	0.6
TURKEY	-6.8	NA	990	1540	2.8
GREECE	-2 4	NA	2590	4420	3.3
YUGOSLAVIA	-0 1	-0.8	1680	2790	4 9
HUNGARY	NA	NA	2280	2090*	4.6

Note Within each country pair the first country underlined is a SAL recipient, the second is not.

Sources. Terms of trade 1975–81, 'World Tables', 3rd ed , Vol. 1, Economic Data Sheet 1 (IBRD)

1981 GNP Per Capita, ibid , Economic Data Sheet 2.

1970–81 GDP Per Capita Growth Rate, ibid , Comparative Economic Data Table 1

Terms of trade 1981–86, 'Handbook of International Trade and Development Statistics, 1987', UNCTAD.

1976 GNP per capita, 'World Development Report', 1978, Annex, Table 1, (IBRD)

effects of a major exogenous factor, countries have also been paired on the basis of having experienced similar trends in their terms of trade during both the pre-SAL and the SAL period. Table 2 shows the countries in the SAL group and those chosen to form the Non-SAL control group, along with the terms of trade and GNP and GDP growth rate basis for the pairing. The first country in each pair (underlined) is the SAL country and that immediately beneath it is the paired Non-SAL country selected as a member of the control group.

Even using the limited pairing criteria of terms of trade, GNP per capita, and GDP growth rates, no pairing is perfect. In particular, the pairings of Bolivia and Colombia, Costa Rica and Honduras, Cote d'Ivoire and Cameroon, Malawi and Zimbabwe and Philippines and Indonesia, may be called into question, for all that they are the best available.

However, this method of selecting a control group is certainly an advance over the cruder method of simply comparing the economic record of SAL countries with that of the Non-oil LDC groups as a whole and attributing any difference in performance to the impact of SALs [*Mosley, 1987; World Bank, 1986*]. Not only does the Non-oil LDC 'without' group contain the 'with' group as a sub-set, it also makes no allowance for the possibly unrepresentative nature of SAL countries.

The comparative performance of annual average real GDP growth rates for the SAL group and Non-SAL control group is given in Table 3. This table provides an example of the type of data-set and aggregation procedure used to derive annual average values for the evaluation variables over different periods of time for the two groups of countries. The results for variables other than GDP growth rates are reported in the summary Table 4.[5] Taking 1976–79 as the pre-SAL period and 1980–86 as the SAL period, Table 3 shows that for both groups of countries annual average GDP growth rates fell significantly during the latter period. This is hardly surprising since the period was characterised by the effects of the second oil price shock, world economic recession, declining commodity prices, rising interest rates and severe drought in Sub-Saharan Africa. However, given that programme aid in the form of SALs was introduced as a response to the effects caused by the above changes in the international economic environment, one would expect the decline in GDP growth rates to be less severe in the case of countries receiving SALs. Surprisingly, Table 3 shows the opposite result. Annual average GDP growth rates for the SAL countries fell from 4.59 per cent in the 1976–79 period to 2.03 per cent in the 1980–86 period, that is, a growth rate decline of 56 per cent. By contrast, the annual average growth rates for the Non-SAL control group fell from 3.88 per cent in the 1976–79 period to 2.78 per cent in the 1980–86 period, that is, a decline of 28 per cent.

The above unfavourable comparison cannot be explained by non-randomness of SAL country selection, in the sense of SAL countries having inherently weaker economies than their Non-SAL counterparts. The control group had a *lower* annual average GDP growth rate of 3.88 per cent in the pre-SAL period compared to 4.59 per cent for the SAL

TABLE 3
REAL GDP GROWTH RATES (%PA)

SAL COUNTRIES	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	AVE.ANN G.RATE 1976-79	AVE.ANN G.RATE 1980-86	AVE.ANN G.RATE 1976-81	AVE.AN G.RATE 1982-8
Bolivia	6.8	3.5	2.8	1.5	-1.5	0.4	-2.8	-6.8	-0.9	-1 7	-2.9	3.65	-2.29	2.25	-2.98
Burundi	8.2	7.0	9.1	1 9	3.3	10.3	-2.7	1.9	3 1	4 1	4 9	6.35	3.43	6.63	2.08
Chile	4 1	8.3	6.0	8.5	7.8	5.5	-13.1	-0.5	6.0	2.4	5 4	6.73	1.93	6.70	0.04
Costa Rica	5.5	8.9	5 7	4.3	0.8	-2.3	-7.3	2.7	7.9	0.9	4 4	6.11	1.01	3.82	1.72
C.D'Ivoire	12.0	8.6	10.3	4.2	12.2	2.7	1.9	-3.5	-2.4	5.9	3 7	8 77	2.93	8.33	1 12
Ghana	-5 7	1.2	1 0	1.5	0.6	-2.9	-6.5	-4.5	8.7	5 4	4.3	0.50	0.73	-0.72	1 48
Guyana	2.9	0.0	0.0	4 0	2.0	4.5	-10.8	-10.8	5.8	1.8	1.5	1 73	-0.79	2.23	-2.40
Jamaica	-6.7	-4.0	0.0	-1 7	-5.8	2.5	-0.2	1.2	0.0	-5 4	2.2	-3.10	-0.79	-2.62	-0.44
Kenya	5.1	9.2	6.7	3.5	4.8	2.9	2.5	3.2	0.9	4 1	4 0	6.13	3.20	5.37	2.94
Malawi	4 1	5 9	7.2	5.6	0.6	-6.2	2.5	3 8	4.3	5.8	-1.1	5 70	1.39	2.87	3.06
Nepal	4 4	3.2	3.3	2.4	2.3	8.3	3.8	-3.0	7.8	3.0	4.0	3.32	3.09	3.21	3 12
Niger	17 7	6.5	10.0	4 7	4.8	1.2	-1.2	-1.8	-14 7	5.8	6.5	9.73	0.09	7.48	-1.08
Pakistan	3.6	7 0	5.9	6.0	8 8	7.0	6.2	6.4	5.3	8 0	7.5	5.63	7.03	6.38	6.68
Panama	-0.3	3.4	2.7	4.9	15.1	4.2	4.9	-0.2	0.4	4 1	3.0	2.67	4.39	5 00	2.29
Philippine	7.5	6.1	6.3	5.8	5.3	3.8	2.9	1.1	-6.3	-4.6	1.1	6.42	0 47	5.80	-1 16
Senegal	7.3	0 7	-9 1	11 0	-3.1	-1.2	15.4	2.2	-4.0	3.8	4.5	2.48	2.51	0 93	4.38
Thailand	9.8	5.8	8 4	6.6	5.8	6.3	4.1	5.9	5.5	3.2	3.5	7.65	4.90	7.12	4.44
Togo	0 4	-4 2	5.8	3.6	14.5	-3 4	-3.3	-5.7	0.7	5.0	3.1	1.40	1.56	2.78	-0.04
Turkey	8.6	4.4	3.3	1.0	-0 7	4.4	5.0	3.7	5.7	5.1	8.2	4.33	4.49	3.50	5.54
Yugoslavia	3.8	8.0	7.1	6.9	2.4	1.3	0.6	-1.1	1.8	1.0	3.4	6.44	1.34	4.91	1.14
SAL GROUP AVE.												4.59	2.03	3.92	1.75
STANDARD DEVIATION												3.16	2.23	2.82	2.95
LOW SLIPPAGE SAL GROUP AVE												3.87	2.14	3.66	2.28
STANDARD DEVIATION												4.21	1.90	3.86	2.45

countries. However, it may partly be explained by the existence of IMF arrangements in virtually all countries receiving SALs. It is possible that the implementation of Fund conditions before the receipt of a SAL imposed a succession of deflationary shocks, thus causing an adverse medium-term impact on GDP growth. The possibility that stabilisation effects more than outweighed the structural adjustment influence on medium-term GDP growth rates will be examined further in the regression work of section IV below.

In order to explore the influence of implementation of Bank-imposed policy conditions, the SAL group has been disaggregated by isolating those SAL countries with low levels of slippage on SAL policy con-

TABLE 3 (cont)

SAL COUNTRIES	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	AVE.ANN G.RATE 1976-79	AVE.ANN G.RATE 1980-86	AVE.ANN G.RATE 1976-81	AVE.A G.RAT 1982-
Colombia	4 6	4 9	8.8	5.3	4 1	2.3	1 0	1.9	3.8	3 1	5 1	5.90	3 04	5 00	2.98
Rwanda	7.8	5.2	3 0	4 2	10.2	8.8	1.7	0.3	-6.0	7.5	4 9	5.05	3.91	6.53	1.68
Peru	2.0	0.0	-0 7	3.5	2.9	3.0	0.3	-11.8	4.7	2.5	8.0	1.20	1.37	1 78	0 74
Honduras	4.5	7.0	7.9	5.1	2.7	1.2	-1.8	-0.2	2.3	1 8	1.8	6.13	1.11	4 73	0 78
Cameroon	6.2	4 9	5.5	4.3	11.2	15.5	7.8	6 9	7 6	6.9	5.3	2.29	8 74	7.93	6 90
Zambia	8.3	-4 4	0.5	6 9	3 1	6.2	-2 8	-2.0	-0 4	1.5	0.5	2.83	0.87	3.43	-0.64
El Salvador	4.0	5.2	4 4	-3 1	-8 7	-8.3	-5 7	0 6	2.3	1 8	0.9	2.78	-2.44	-0 98	-0 02
Nicaragua	5 0	6.3	-7.2	-24.8	10.0	5.3	-0 8	4.6	-1 6	-4 1	-0.4	-5 17	1 86	-0 90	-0 46
Tanzania	6 4	6.5	5 6	3.0	3.3	-0.8	1.8	-2.0	3.2	2.3	3 8	5.38	1.66	4 00	1.82
Zimbabwe	-1.6	-7.3	-3.6	1.5	6.0	15.8	-0.6	1 7	0.5	5.0	1 7	-2.75	4.30	1 80	1.66
Burma	4.2	6 1	6 0	5 6	7.9	6.4	5.6	4 4	5.6	4.3	3 7	5.47	5.41	6.03	4.72
Mauritania	5 1	-2.0	-1 4	3 0	4.0	3.8	-2.1	6.5	0.3	0.0	4.9	1.18	2.49	2.08	1.92
Egypt	8 0	8.8	8.0	8 6	14.3	6 7	6 0	5.2	5.2	1 6	-1.5	8.35	5.36	9 07	3.30
Guatemala	7 4	7.8	5.5	5.0	3.7	0.7	-3 4	-2.7	0 0	-0 6	0.2	6.43	-0.30	5 02	- 1.30
Indonesia	6.9	7.4	7.2	6.0	9.9	7.9	2.2	4.2	6.2	1.9	3.2	6.88	5.07	7.55	3.54
Sierra Leone	1.4	0.3	1.7	0.8	3.1	5.5	4 9	-1.8	0.3	0.0	-0.3	1.05	1.67	2.13	0.62
Malaysia	11.1	7.6	7.6	8.5	7.4	6.9	6.0	6.4	7.9	-1.1	1.1	8.70	4.94	8.18	4.06
Benin	3.4	2.1	5.5	4.1	6.5	9.0	6.8	-2.0	2.3	6.6	0.0	3.77	4.17	5.10	2.74
Greece	6.5	3.4	6.2	3.8	1.8	0.0	0.4	0.4	2.8	3.0	1.3	4.98	1.39	3.62	1.58
Hungary	3.0	8.2	4.5	1.5	-0.9	2.5	2.6	0.3	2.5	-1.4	0.5	4.30	0.87	3.13	0.90
NON-SAL CONTROL GROUP AVE												3.88	2.78	4.33	2.02
STANDARD DEVIATION												3.46	2.50	3.17	2.12
NON-SAL LOW SLIPPAGE SAL GROUP AVE												2.35	3.46	4.29	2.75
STANDARD DEVIATION												4.50	2.65	3.54	2.52

Notes The growth rates are annual average rates of real GDP at constant market prices
Source UNCTAD, 'Handbook of International Trade and Development Statistics', 1981 and 1987, Table 6 2

ditions. The countries which comprise the low slippage SAL group are: Chile; Cote d'Ivoire; Ghana; Jamaica; Malawi; Thailand; Togo; and Turkey.[6] The countries paired with these low slippage SAL countries are: Peru; Cameroon; Zambia; Nicaragua; Zimbabwe; Malaysia; Benin; and Greece, and they are used as the Non-SAL low slippage control group.

Comparing the low slippage SAL group with the associated control group leads to a result which is alarming even when the depressive effects of stabilisation measures and the lag in effect of SAL measures are taken

TABLE 4
AGGREGATE COMPARISON OF SAL COUNTRY AND SAL COUNTRY MACRO VARIABLES
(Bracketed figures = Standard Deviations)

	CONSUMPTION AS % OF GDP			
SAL Country Group Ave	82.52 (7 04)	85.21 (6.82)	81.93 (7 62)	85.71 (5 83)
Low Slippage SAL Country Group Ave	81.45 (7.95)	85.17 (5 99)	77.41 (3.22)	83.03 (3.90)
Non-SAL Country Group Ave	80.82 (6.40)	84.21 (9 25)	81.80 (7.73)	84.49 (11.41)
Low Slippage Non-SAL Country Group Ave	77.87 (6.91)	79.31 (7.15)	76.99 (8.26)	75.97 (7.90)
	INVESTMENT AS % OF GDP			
SAL Country Group Ave	24.02 (7.09)	20.04 (6.31)	27.11 (3.63)	19.32 (4 00)
Low Slippage SAL Country Group Ave	21.60 (9.81)	17.24 (7.19)	27.81 (1.91)	19.29 (2.92)
Non SAL Country Group Ave	20.77 (3.60)	19 97 (5 86)	21.11 (3.75)	20.58 (7.39)
Low Slippage Non-SAL Country Group Ave	19.89 (4.84)	22 01 (6.37)	2.09 (6.01)	25.29 (6.89)
	BALANCE OF PAYMENTS CURRENT ACCOUNT AS % GDP			
SAL Country Ave	-6.57 (2.87)	-6.10 (4.18)	-7.26 (2.64)	-4.81 (4.64)
Low Slippage SAL Country Group Ave	-5.09 (3.15)	-6 29 (3.59)	-7.15 (3.12)	-6.06 (3 73)
Non-SAL Country Group Ave	-5.44 (6.78)	-8.79 (7.12)	-4.76 (4.49)	-6.79 (5.57)
Low Slippage Non-SAL Country Group Ave	-2.37 (3.52)	-9.53 (6.78)	-4.12 (3.21)	-10.25 (8.07)
	REAL EXPORT GROWTH RATES			
SAL Country Group Ave	14.93 (11.10)	4.93 (8.20)	12.92 (7.91)	-0.44 (6.21)
Low Slippage SAL Country Group Ave	14.97 (8.80)	7.64 (9.73)	15.27 (7.18)	1.96 (6.53)
Non-SAL Country Group Ave	19.01 (9.76)	0.23 (7.15)	13.47 (5.52)	-1.38 (7.59)

Low Slippage Non-SAL Country Group Ave	20.43 (8.54)	-2.63 (7.05)	13.54 (5.86)	-1.17 (7.32)
	REAL IMPORT GROWTH RATES			
SAL Country Group Ave	14.81 (10.02)	1.81 (7.27)	11.78 (4.88)	-4.06 (5.11)
Low Slippage SAL Country Group Ave	14.84 (11.38)	2.45 (10.83)	12.11 (5.64)	-4.35 (6.05)
Non-SAL Country Group Ave	11.05 (9.20)	3.43 (6.93)	15.68 (7.53)	-3.44 (7.09)
Low Slippage Non-SAL Country Group Ave	7.78 (11.14)	5.74 (5.50)	17.63 (5.64)	-1.43 (5.83)

Notes Real export and import growth rates are for current US$ values

Sources IMF, 'International Financial Statistics', 1987 Yearbook, tables 96 Fr and 96 cr and country tables IBRD 'World Development Report', 1978–1988 Tables 1 and 3. UNCTAD, 'Handbook of International Trade and Development Statistics' 1981 and 1987, Tables 1 5 and 1 6

into account. Annual average GDP growth rates for the low slippage SAL countries fell from 3.87 per cent in the 1976–79 period to 2.14 per cent in the 1980–86 period. Although this decline is less dramatic than that for the SAL country group as a whole, it contrasts very unfavourably with the annual average GDP growth rate for the Non-SAL low slippage control group, which has *increased* from 2.35 per cent in the 1976–79 period to 3.46 per cent in the 1980–86 period.

The conclusion which must be drawn from the above analysis is that, despite having a stronger growth record in the latter half of the 1970s, and despite receiving programme aid, the SAL group of countries have performed significantly worse than their Non-SAL counterparts, in terms of the GDP growth rate criterion, during the 1980s, that is, the period when SALs were in place. In addition, for those SAL countries in which compliance with SAL policy conditionality was high, the performance of the GDP growth rate variable was even more unfavourable than performance in the relevant control group.

A possible explanation of the above 'perverse' results is that the time period we have chosen to represent the pre-SAL and the SAL period have been incorrectly defined. Given that the Bank's SAL reforms, such as domestic price liberalisation, import liberalisation, introduction of export incentive schemes, fiscal reform and the strengthening of public sector institutions, are primarily intended to stimulate the supply side of the recipient's economy, one would expect beneficial results to become apparent only in the medium to long-term. Hence, in the first years in which a SAL is in place it is possible that the economic decline which motivated the country to request a SAL will continue unarrested. Classifying 1980–86 as the SAL period makes no allowance for this medium-term nature of SAL policy packages. In addition, although the first SALs

were granted in March 1980 to Kenya and Turkey, many countries were not granted SALs until a much later date (Table 1).

In order to make some allowance for the medium-term nature of SAL conditionality, a second set of comparisons has been carried out, with 1976–81 classified as the pre-SAL period and 1982–86 as the SAL period. In addition, Burundi, Chile, Costa Rica, Ghana, Nepal, and Niger are excluded from the SAL group in these comparisons due to the fact that all received their first SAL in 1985 or later. Their paired countries are likewise excluded from the Non-SAL control group. The same countries are also omitted from the low slippage SAL group and the Non-SAL low slippage control group in the 1976–81 and 1982–86 comparisons.

Table 3 shows that annual average GDP growth rates for the SAL group of countries as a whole fell from 3.92 per cent in the 1976–81 period to 1.75 per cent in the 1982–86 period, that is, a decline of 55 per cent. For the Non-SAL control group, the fall was from 4.33 per cent in 1976–81 to 2.02 per cent in 1982–86, that is, a decline of 53 per cent. This result is much more favourable to the SAL countries, since despite having a weaker GDP growth rate performance in the newly defined pre-SAL period, the growth rate decline in the SAL period is much the same for both groups of countries. This therefore provides some evidence for a favourable, although weak, impact of SAL finance and conditionality on the GDP growth rate variable.

An identical conclusion emerges when we compare the performance of the low slippage SAL group and the Non-SAL low slippage control group in the in the 1976–81 and 1982–86 periods. This similarity in the performance of the SAL group as a whole and the low slippage SAL group, relative to their relevant control groups, implies that the degree of slippage on SAL policy conditionality makes no difference to the comparative performance. This would suggest that it is the disbursement of the SAL financial flow, rather than the attached SAL policy conditionality, that gives rise to the favourable, but weak, impact on SAL country GDP growth rates. Indeed, the value of SAL disbursements are, on average, equal to 2.27 per cent of disbursement-year GDP for the SAL group as a whole (Table 1). The fact that the beneficial impact of SAL financing only shows up in the 1982–86 period, and not in the 1980–86 period, may be because many countries did not receive their first SAL until after 1981.

In order to investigate the channels through which SAL financing and conditionality may affect GDP, trends in consumption and investment as a percentage of GDP have been compared for the SAL and Non-SAL control Groups (Table 4).

It has been suggested by several commentators [*Mosley, 1987; Mosley and Smith, 1989; Kydd and Hewitt, 1986*] that the disbursement of SAL financing may enable a country to maintain an otherwise unsustainable level of consumption, in particular, by providing foreign exchange to finance imports:

> ... aid flows to Africa were at best held constant rather than

> increased in real terms during the 1980s and increasingly were switched during this period from capital projects, which might hold out some relief for the government development budget, to conditional programme loans, which mainly financed consumption [*Mosley and Smith, 1988: 12*].

Even more alarming is the suggestion that in countries where compliance with SAL conditionality is high, the effect of the conditions themselves, particularly in conjunction with pre-existing IMF demand-side conditionality, may be to curb both public and private sector investment, to the detriment of long-term growth. For example, the impact of stabilisation and adjustment in most Sub-Saharan countries has been shown to have resulted in a downward movement in the overall volume of investment [*Mosley and Smith, 1989; World Bank, 1989b, 1990. 15*]. A possible explanation of such a trend lies in the fact that a government's development budget politically represents a much easier target for expenditure reduction than the recurrent expenditure account (which consists largely of public sector wages and salaries) such that government capital spending has borne the weight of fiscal stabilisation.

Has SAL finance enabled profligate consumption expenditure by recipients, and can the Sub-Saharan phenomenon of investment reduction, necessitated by stabilisation and adjustment-loan conditionality, be generalised to SAL countries as a whole? Table 4 shows that for the SAL countries consumption as a percentage of GDP increased from an annual average of 82.52 per cent in the 1976–79 period to 85.21 per cent in the 1980–86 period. However, for the Non-SAL control group the increase was virtually identical over the same period: 80.82 per cent in 1976–79 to 84.21 per cent in 1980–86. Taking 1982–86 to define the SAL period, and excluding late SAL recipients from the SAL group, does not change the result. Consumption as a percentage of GDP increased by a similar magnitude for both the SAL and the Non-SAL groups of countries. Likewise, the experience of the low slippage SAL group and the relevant control group is much the same as for the SAL group as a whole.

In short, consumption as a percentage of GDP increased slightly in the 1980s (with the exception of the Non-SAL low slippage control group in the 1982–86 period). But since this affected both SAL and Non-SAL countries equally, it does not support the theory that it was the availability of SAL financing which enabled SAL countries to sustain their increased consumption expenditure.

Table 4 also shows trends in investment as a percentage of GDP. For the SAL group as a whole investment's share in GDP fell from an annual average of 24.02 per cent in 1976–79 to 20.40 per cent in 1980–86, a decline of 17 per cent. For the Non-SAL control group, it fell from 20.77 per cent in 1976–79 to 19.97 per cent in 1980–86, that is, a decline of four per cent for the periods 1976–81 and 1982–86. The SAL group's investment share, meanwhile, fell from 27.11 per cent to 19.32 per cent, that is, a decline of 29 per cent, whilst for the Non-SAL control group the corresponding fall was from 21.11 per cent to 20.58 per cent, that is, a decline of 2.5 per cent.

The above results indicate that although investment as a share of GDP fell for all countries, the decline was much more severe for SAL countries, particularly when 1982–86 is defined as the SAL period. This finding is consistent with a number of macro-studies on the impact of aid, the results of which show a negative correlation between aid and savings as a share of GNP [*Papanek, 1972; Mosley, 1980*].

Confining the comparison to investment shares of SAL countries with low slippage on policy conditions, the result is even more unfavourable. Between 1976–79 and 1980–86, investment as a share of GDP fell from an annual average of 21.60 per cent to 17.24 per cent for low slippage SAL countries, that is, a decline of 20 per cent, whilst for the control group the share of investment in GDP actually *rose* from 19.89 per cent to 22.01 per cent, that is, an increase of 11 per cent. If 1982–86 is defined as the SAL period, investment as a share of GDP in the low slippage SAL countries fell from 27.81 per cent in 1976–81 to 19.29 per cent in 1982–86, that is, a decline of 31 per cent, whilst for the Non-SAL low slippage control group it rose from 22.09 per cent to 25.29 per cent, that is, an increase of 15 per cent.

As the attention of the international community switches from adjustment in the 1980s to the restoration of long-term growth in the 1990s, this decline in investment levels has been the source of considerable concern, since it poses a threat to future growth prospects. Both the Bank's recent reports on adjustment lending [*World Bank, 1988b, 1990*] have examined the influence of such lending on investment, have been concerned that it is lower in adjustment-lending than in non-adjustment lending countries and in the case of the second report have gone into considerable detail concerning how investment levels might be boosted. The second Bank report [*World Bank, 1990: 85*] names four reasons for declining investment levels (deterioration in government and fiscal conditions, a decline in GDP growth rates, increased economic instability and the debt overhang); but none of these factors, in our view, explains why adjustment lending (SAL) countries should suffer more severely from these problems than others. Our own explanatory hypotheses are as follows:

(1) *expenditure switching*: SAL countries, whose aid inflow was switched from project to programme form during the 1980s, thereby received more latitude to switch those flows from investment to consumption purposes, an opportunity of which, under severe economic stress, many of them gratefully took advantage.
(2) *compression of the development budget*: All countries receiving SALs were required, as a prior condition, to conclude stand-by agreements with the Fund, which were invariably themselves conditional on measures to reduce the budget deficit. In principle, this can be done in three ways. But all measures to increase revenue – taxes, fees, user charges – take a long time to increase their yield, and measures to cut the government *recurrent* budget are politically most unpopular, since they involve either compulsory redundancies in the public sector or reductions in subsidies which may rapidly cause riots. This leaves

the government *development* budget, which consists of *plans* to spend money on equipment and maintenance and hence can be altered in a manner which, in the short term, is both quick and politically invisible. Hence those countries which have chosen the path of strong economic reform in the 1980s have almost invariably done so by the route of cuts in government development spending which were out of proportion to the size of the overall macroeconomic adjustment [*Hicks and Kubisch, 1984; Mosley and Smith, 1989*].

(3) *private-sector knock-on effects*: It was hoped by the Bank in the early 1980s (e.g. Michalopoulos 1987) that measures of macroeconomic adjustment, and specifically a reduction of the government's claim on aggregate resources, would stimulate both foreign private investment (through the award of a Bank/Fund 'seal of approval') and domestic investment (through the reduction of interest rates). But these mechanisms appear to have been inoperative, at least in the poorer developing countries. In Ghana, Kenya, Jamaica and the Philippines, for example [*Mosley, Harrigan and Toye, 1990: Vol. 2, Chs. 12, 14, 16 and 17*] reform has been carried out, as part of an SAL agreement, and investment has not revived. In these cases, very probably, a Keynesian mechanism, by which the decline in public sector expenditure lowers aggregate demand and the private-sector output, appears to dominate any effects operating through the interest rate [*Taylor, 1988: 51*].

In other words, it appears that the tendency of adjustment to reduce aggregate expenditure has dominated, at least for the present, its tendency to switch resources into growth-promoting uses.

Thirdly, Table 4 shows trends in the annual average *balance of payments on current account* as a percentage of GDP. For the SAL group as a whole the current account deficit as a percentage of GDP remained fairly constant between the 1976–79 and 1980–86 periods, falling from −6.57 per cent to −6.10 per cent. By contrast, for the Non-SAL control group, the deficit deteriorated quite sharply between the two periods, rising from −5.44 per cent to −8.70 per cent. When 1982–86 is defined as the SAL period, the SAL country current account deficit as a percentage of GDP improved from −7.26 per cent in 1976–81 to −4.81 per cent in 1982–86, whilst for the Non-SAL control group it rose from −4.78 per cent to −6.79 per cent.

If the analysis is confined to countries with low slippage on SAL conditionality, the comparison is even more favourable to SAL recipients. Between 1976–79 and 1980–86, the annual average current account deficit as a percentage of GDP for low slippage SAL countries increased slightly from −5.09 per cent to −6.29 per cent, whilst for the Non-SAL low slippage control group it increased sharply from −2.37 per cent to −9.39 per cent. With 1982–86 defined as the SAL period, the low slippage SAL group deficit as a percentage of GDP fell from −7.15 per cent in 1976–81 to −6.06 per cent in 1982–86, whilst for the Non-SAL low slippage control group it increased sharply from −4.12 per cent to −10.25 per cent.

The above results indicate that, regardless of how the SAL period is defined, countries receiving SAL packages experienced considerably more favourable trends in their current account deficits compared to the Non-SAL control groups. In addition, two further pieces of evidence lend support to the conclusion that this favourable relative current account performance was due to SAL policy conditionality:

1. The favourable performance of the SAL countries relative to the relevant control group is more marked when 1982–86, rather than 1980–86, is defined as the SAL period. This is to be expected if the improvement was brought about by policy conditions aimed at stimulating export production and curbing imports, where a lag between implementation and effect can be expected to exist.
2. The favourable current account performance, relative to the relevant control group, is most marked for those SAL countries in which compliance with SAL policy conditionality was greatest, that is, the low slippage SAL countries.

However, it should again be noted that we have not been able to isolate the SAL effect from the possible effects of IMF stabilisation packages, or from the programme lending activities of the bilaterals. Hence, it is possible that part of the favourable current account performance observed in SAL countries is due to the lending activities of other agencies.

A key question which arises from the above findings regarding balance of payments trends concerns the channels through which the favourable SAL country current account performance was brought about. Was it, for example, due to successful stimulation of the export side of the economy, or was it predominantly due to a curbing of imports – with possibly adverse effects on domestic production activities which use imported inputs and hence on investment and growth? If the latter, this might help to explain the disappointing investment trends and GDP growth rate performance in the SAL countries.

We now split the balance of payments picture up to consider annual average trends in real export and real import growth rates. Between 1976–79 and 1980–86, the SAL country export growth rate fell from 14.93 per cent to 4.93 per cent, that is, a decline of 67 per cent. For the Non-SAL control group the corresponding fall was from 19.01 per cent to 0.23 per cent, that is, a decline of 99 per cent. If 1982–86 is defined as the SAL period, real export growth rates for SAL countries fell from 12.92 per cent in 1976–81 to −0.44 per cent in 1982–86, that is, a decline of 103 per cent, whilst for the Non-SAL countries the corresponding fall was from 13.47 per cent to −1.38 per cent, that is, a decline of 110 per cent. Confining the comparison to low slippage SAL countries a similar pattern emerges, namely, the decline in real export growth rates is less severe for the SAL group than the Non-SAL group both in the 1980–86 and the 1982–86 periods.

The above trends in annual average real export growth rates show that both the SAL and Non-SAL countries experienced a decline in their

export growth rates during the 1980s. This is not surprising, given that the period was characterised by world recession and declining commodity prices. However, in the SAL group of countries, the decline in growth rates was less severe than that experienced by the Non-SAL control group, suggesting that SAL conditionality helped to stem what would otherwise have been a much more marked deterioration in export performance.

Regarding import growth rates, for the SAL group as a whole, the import growth rate fell from 14.81 per cent in 1976–79 to 1.81 per cent in 1980–86, that is, a decline of 88 per cent, whilst for the Non-SAL control group, it fell from 11.05 per cent to 3.43 per cent, that is, a decline of 69 per cent. If 1982–86 is defined as the SAL period, the SAL country import growth rate fell from 11.78 per cent in 1976–81 to −4.06 per cent in 1982–86, that is, a decline of 135 per cent, whilst for the Non-SAL control group the corresponding fall was from 15.68 per cent to −3.44 per cent, that is, a decline of 122 per cent. Confining the analysis to the low slippage SAL countries, the annual average real import growth rate for this group fell from 14.84 per cent in 1976–79 to 2.45 per cent in 1980–86, that is, a decline of 84 per cent, whilst for the Non-SAL low slippage control group it fell from 7.78 per cent to 5.47 per cent, that is, a decline of 26 per cent With 1982–86 defined as the SAL period, import growth rates for the low slippage SAL countries fell from 12.11 per cent in 1976–81 to −4.35 per cent in 1982–86, that is, a decline of 136 per cent, whilst for the Non-SAL low slippage control group the corresponding fall was from 17.63 per cent to −1.43 per cent, that is, a decline of 108 per cent.

The above results indicate that annual average real import growth rates fell for all countries during the 1980s. However, in all cases, the decline was greater for SAL countries than for the relevant Non-SAL control group, suggesting that SAL packages provided added impetus to the LDC need to curb imports in response to the increasing current account deficits experienced during the 1980s. This finding is supported by the fact that the SAL country import decline, relative to the relevant control group, is greater for the low slippage SAL countries than for the SAL group as a whole. Hence, although it is possible that the disbursement of SAL finance may, in the short run, aggravate the current account deficit by providing credit for otherwise unaffordable imports [*Mosley, 1987: 28*], the net impact of SAL financing and conditionality over the SAL period as a whole, has had the opposite effect. This leads us to the conclusion that the relatively favourable performance of SAL country current account balances during the 1980s was the combined result of successful SAL conditions aimed at stimulating export performance in the face of an adverse external trade environment and of SAL conditions which helped to curb import growth rates.

We are encouraged by the fact that the striking findings reported above are in large measure consistent with the results of the two evaluation exercises carried out by the World Bank [*1988, 1990*] using a similar control group methodology but a different choice of sample, comparison period and method of comparison. Full details are given in Table 5

below. But *all* these tabular studies share common methodological problems: they are highly sensitive to the choice of 'with and without SALs' time period; exogenous variables such as terms of trade movements are not taken into account; the influence of the World Bank's finance is not disentangled from that of the IMF; and the standard deviations reported in Tables 3 and 4 are quite large, reflecting considerable diversity of response *within* both the SAL and the non-SAL group of countries. Regression analysis, by explicitly taking account of each data point and of the influence of variables extraneous to SAL finance such as weather, terms of trade and IMF financial flows, can help tackle at least the last three of these problems. We now proceed to explore the possibilities of this method of analysis as an evaluation technique for policy-based lending.

IV REGRESSION ANALYSIS

The tabular comparisons undertaken in section III provide useful information concerning the 'yes/no' question: was the influence of Structural Adjustment Loans positive or not? However, this approach cannot tell us the precise quantitative influence of programme lending in relation to other influences; nor can it explicitly isolate the influence of exogenous non-policy variables, such as that of the weather and terms of trade movements, from the influence of programme lending; nor, within the category of programme lending, can it isolate the influence of Bank SALs from Fund programmes, or the influence of policy changes attached to SALs from the influence of the money which they provide. To answer such questions we need a technique which will tell us what proportion of the variance in our chosen variables is accounted for by specific independent variables. The appropriate technique for this purpose is multiple regression, and in this section we apply those methods to the same sample of SAL countries examined in section III.

The five equations which we wish to estimate are as follows:

$$(1)\ gGDP_t = A + {}_{a1}IMF_t + {}_{a2}SAL_t + {}_{a3}SAL_{(t-1)} + {}_{a4}SAL_{(t-2)} + {}_{a5}CI_t + {}_{a6}CI_{(t-1)} + {}_{a7}CI_{(t-2)} + {}_{a8}W_t + {}_{a9}TOT_t + {}_{a10}INV_t + {}_{a11g}EX_t$$

$$(2)\ gEX_t = B + {}_{b1}IMF_t + {}_{b2}SAL_t + {}_{b3}SAL_{(t-1)} + {}_{b4}SAL_{(t-2)} + {}_{b5}CI_t + {}_{b5}CI_{(t-1)} + {}_{b6}CI_{(t-1)} + {}_{b7}CI_{(t-2)} + {}_{b8}W_t + {}_{b9}EPI_t + {}_{b10}INV_t$$

$$(3)\ gIM_t = C + {}_{c1}IMF_t + {}_{c2}SAL_t + {}_{c3}SAL_{(t-1)} + {}_{c4}SAL_{(t-2)} + {}_{c5}CI_t + {}_{c5}C_{(t-1)} + {}_{c7}CI_{(t-2)} + {}_{c8}W_t + {}_{c9}TOT_t + {}_{c10}INV_t$$

$$(4)\ gINV_t = D + {}_{d1}IMF_t + {}_{d2}SAL_t + {}_{d3}SAL_{(t-1)} + {}_{d4}SAL_{(t-2)} + {}_{d5}CI_t + {}_{d6}CI_{(t-1)} + {}_{d7}CI_{(t-2)} + {}_{d8}W_t + {}_{d9}TOT_t$$

$$(5)\ FF_t = E + {}_{e1}IMF_t + {}_{e2}SAL_t + {}_{e3}SAL_{(t-1)} + {}_{e4}SAL_{(t-2)} + {}_{e5}CI_t + {}_{e6}CI_{(t-1)} + {}_{e6}CI_{(t-1)} + {}_{e7}CI_{(t-2)} + {}_{a8}W_t + {}_{e9}TOT_t + {}_{e10}INV_t$$

where:

gGDP = growth rate of GDP
IMF = drawings of IMF finance as a percentage of GDP
SAL = SAL and SECAL finance as a percentage of GDP
CI = compliance index on SAL policy conditions
W = weather index
TOT = terms of trade index
gEX = growth rate of exports
DPI = export price index
gIM = growth rate of imports
INV = investment as a share of GDP
FF = inflows of private foreign finance

A,B,C,D,E, = constants

a1 a11
b1 b10
c1 c10 coefficients
d1 d9
e1 e10

t, t−1, t−2 = annual time periods

TABLE 5

EFFECTIVENESS OF ADJUSTMENT LENDING COMPARISON OF WORLD BANK RESULTS WITH THOSE BASED ON DATA USED IN OUR STUDY

(Figure in each cell is percentage of AL countries who performed better on the stated indicator than their NAL comparator country).

STUDY	This Study	World Bank (1988b)
COVERAGE	Structural Adjustment Loans 1980 - 87	All Programme Aid Loans 1980 -87
PERIOD OF MEASUREMENT	1982 - 86	Three Years following Loan Disbursement
INDICATORS		
Growth of Real Exports	50	53
Investment as % of GDP	38	37
Growth of Real Exports	65	57
Current Account Balance as % of GDP	79	70

Sources· World Bank, 1988b, Table 2.4a and Tables 3 and 4 above

The five equations hypothesise that changes in the five dependent variables, which we are using as criteria for evaluating the effectiveness of Bank programme lending – GDP growth, export growth, import growth, investment as a share of GDP and inflows of foreign private finance – are determined by: disbursements of IMF and World Bank programme aid finance; the level of compliance with policy reform conditions associated with SAL and SECAL loans; the influence of weather; and terms of trade movements (movement in the export price index in the case of export growth rates). In addition it is hypothesised that GDP growth, export growth, import growth, and flows of private foreign finance are influenced by changes in investment as a share of GDP, whilst the GDP growth rate is also assumed to be influenced by changes in the export growth rate. The Bank finance variable and the compliance variable enter each equation with one and two period lags since the injection of Bank finance into an economy may have multiplier effects on the dependent variables which take several years to emerge whilst the effects of compliance with Bank policy conditions may also take several years to materialise. It should be noted that the equations represent somewhat crude hypotheses regarding the determinants of the five dependent variables – they contain a limited number of independent variables, a limited lag structure, and the system of structural equations is not identified.

Since all of the equations are of a 'reduced form' we can use the ordinary least squares regression technique for their estimation without introducing bias. In order to maximise the number of observations, a hybrid cross-section/time series data set is used. For each variable, observations run from 1980 to 1986 and cover each of the 19 SAL recipient countries analysed in section III, so providing 133 observations. Full details of the data set can be found in Mosley, Harrigan and Toye [*1990: Ch. 7*].

In addition to estimating the equations for the entire sample of nineteen SAL countries, estimates are also made for two sub-groups – Sub-Saharan countries receiving SALs and middle-income countries receiving SALs. This is done in order to ascertain whether Bank programme lending activities have different effects according to the type of country in which they are implemented. For example, several commentators [*Taylor, 1988; Green, 1988*] have noted that Sub-Saharan economies face many unique adjustment problems and hence require different types of adjustment packages as compared to non Sub-Saharan countries. The Sub-Saharan countries include: Cote d'Ivoire, Ghana, Kenya, Malawi, Niger, Senegal and Togo, so giving a data set with 49 observations on each variable. The middle-income countries include: Bolivia, Chile, Costa Rica, Cote d'Ivoire, Guyana, Jamaica, Kenya, Korea, Panama, Philippines, Senegal, Thailand, Turkey and Yugoslavia, so giving 98 observations on each variable. The regression results for each of these three groups of countries are presented in Tables 6, 7 and 8.

The estimation of the *GDP growth rate* equation for the three groups of countries produces mixed results in terms of the impact of Bank SAL and SECAL finance. For the group containing all SAL countries (Table 6)

inflows of finance in the current period, t, and in period t−2, have a weak positive impact on GDP growth, whilst inflows in period t−1 have a weak negative impact. None of the coefficients, however, possess statistical significance. In the case of both the Sub-Saharan group of countries (Table 7) and the middle-income group of countries (Table 8) Bank financial flows in periods t and t−1 have a negative effect on GDP growth rates, whilst flows in periods t−2 have a positive effect.

The general trend which emerges from these results is that for all three groups of countries, Bank financial flows in period t−1 have a negative impact on GDP growth rates, which is statistically significant at the 1 per cent level in the case of middle-income countries. This negative impact of Bank financial flows is unexpected. A possible explanation relates to an inherent conflict contained within programme lending, namely, the fact that the greater the financial flows provided by programme loans in order to bridge a country's balance of payments financing gap, the less the pressure facing the recipient government to implement immediate policy reform. If this is so, the Bank finance variable, by retarding the pace of policy reform, could be expected to have a negative, one-period lagged impact on GDP growth rates of the type shown by our results. Several country case studies carried out by the authors elsewhere [*Mosley, Harrigan and Toye, 1990: Vol. 2*] lend support to this theory regarding the negative correlation between the level of programme aid finance and the rate of both policy reform compliance and GDP growth.

Our regression results are favourable in terms of the effect of compliance with Bank policy conditions on GDP growth rates. For all three groups of countries, compliance in periods t, t−1 and t−2 has a positive impact on GDP growth (with the exception of compliance in period t−2 for Sub-Saharan countries). In addition, the 't−2' compliance variable possesses statistical significance in all three cases – at the 5 per cent level for Sub-Saharan and middle-income countries and at the 1 per cent level for the group containing all SAL countries. This is a robust and encouraging result suggesting that compliance with Bank-guided adjustment reforms has a positive effect on GDP growth rates which emerges most strongly in the year following reform implementation. However, it should be noted in evaluating the *overall* impact of SALs and SECALs, that is, finance plus policy reform, that the positive GDP growth rate effects of compliance with policy reforms in the period t−1 are counter-balanced by the negative effects of Bank financial flows in the period t−1. The net impact of Bank programme lending on GDP consists therefore, at best, of a very weak overall positive effect[8] – a result which is compatible with the findings of the tabular comparisons carried out in section III.

The regression results concerning the impact of the IMF finance variable on GDP growth rates are disappointing. The coefficient is negative in the case of the group of all SAL countries and the Sub-Saharan group of SAL countries and positive in the case of the middle-income group. However, in each the effects are very weak and statistically insignificant, recalling the similar results obtained by Khan and Knight [*1985*]. The weakness of effects may be due to the fact that we have no

TABLE 6

RESULTS OF REGRESSION ANALYSIS ALL SAL COUNTRIES

DEPENDENT VARIABLE (R squared in brackets)	REGRESSION COEFFICIENTS ON INDEPENDENT VARIABLES (Student's T-statistics in brackets beneath co-efficient)													Durbin Watson Statistic
	CONSTANT	IMT(t)	SAL(t)	SAL (t-1)	SAL (t-2)	CI(t)	CI(t-1)	CI(t-2)	W(t)	TOT(t)	EPI(t)	INV(t)	gEX(t)	
GDP growth (0 40)	-24 65** (-5.65)	-0.11 (-0 46)	0 03 (0.05)	-1 85* (-2 54)	0 98 (1 30)	0 23 (0.53)	1 35** (2.87)	0 23 (0 52)	0.12** (4.54)	0.16** (4.07)	N/A	0.01 (0.16)	0.04* (2.57)	1.68
Export growth (0 17)	-0.51 (-0.02)	2 64 (1 83)	-10 03** (3.08)	3 72 (0 84)	1 89 (0 41)	9.63** (3 96)	-6.04* (-2 15)	1.72 (0.64)	-0.15 (-0.97)	N/A	-0.20 (0.94)	-0.25 (-0.71)	N/A	2.49
Import growth (0.13)	24 84 (0.93)	2 91* (1.99)	-6.13 (-1 86)	-2 07 (-0 46)	3 57 (0.77)	6 69** (2.71)	-4 58 (-1 61)	0 34 (0.13)	-0.18 (-1.13)	-0.15 (-0.63)	N/A	0.12 (0.34)	N/A	2.62
Investment as % of GDP (0.25)	-16 37 (-2 42)	0 00 (0.00)	-0 70 (-0.83)	0 53 (0 46)	-0 72 (0 60)	-0 38 (-0 60)	0 49 (0.67)	-0.20 (-0 28)	0 10* (2.39)	0.32** (6.03)	N/A	N/A	N/A	0.66
Private Foreign Finance (0 18)	-1269 71* (-1 97)	-61 81 (-1 76)	-30 62 (-0 39)	-16 16 (-0 15)	-108 64 (-0 97)	-25 46 (0 43)	-2 04 (40 03)	62 43 (0 96)	8.17* (2 15)	6.67 (1.17)	N/A	16.99* (2.01)	N/A	0.81

Note: ** denotes significance of a coefficient at the 1% level and * at the 5% level

TABLE 7

RESULTS OF REGRESSION ANALYSIS SUB-SAHARAN COUNTRIES

REGRESSION COEFFICIENTS ON INDEPENDENT VARIABLES
(Student t T-statistics in brackets beneath co efficient)

DEPENDENT VARIABLE (R squared in brackets)	CONSTANT	IMI(t)	SAL(t)	SAL (t-1)	SAL (t-2)	CI(t)	CI(t-1)	CI(t-2)	W(t)	TOT(t)	EPI(t)	INV(t)	gEX(t)	Durbin Watson Statistic
GDP growth 0.53	-31 87** (-4.82)	-0 04 (-0 08)	-1.47 (-1.33)	-0 87 (-0.72)	1 55 (0.89)	0 16 (0.16)	2 13* (2 03)	-0 34 (-0 30)	0.19** (4.70)	0.19** (3.16)	N/A	0 02 (0.26)	0.03 (1.35)	1.57
Export growth (0.35)	14 35 (0.29)	7.23 (1.84)	-21.30* (-2.50)	18 93 (2.00)	5 81 (0.41)	20.22* (2 58)	-20 72 (-2 64)	4 07 (0.43)	-0.23 (-0.71)	N/A	-0 02 (-0.03)	-0.32 (-0.42)	N/A	2.64
Import growth (0.13)	78 67 (1.44)	5 80 (1.47)	-16.69 (-1.95)	7.41 (0.78)	20.13 (1.39)	16.29* (2 08)	-15 57 (-1 95)	-4 05 (-0.42)	-0.48 (-1.44)	-0.54 (-1.09)	N/A	-0.07 (-0.09)	N/A	3.02
Investment as % of GDP (0.18)	-7.36 (-0 63)	-0 02 (-0 02)	0 13 (0.07)	0 47 (0.23)	-1 44 (-0.47)	-0 68 (-0.41)	0 48 (0.28)	-0 48 (-0 23)	0.07 (1.02)	0.24* (2 37)	N/A	N/A	N/A	0.68
Private Foreign Finance (0.23)	-166 09 (-0.44)	-27 27 (-0.99)	-76 30 (-1 29)	-69 10 (-1.05)	96 99 (0 97)	47 03 (0.87)	43 27 (0.70)	49 40 (0.74)	2.24 (0.97)	0.99 (0.29)	N/A	-0.25 (-0.05)	N/A	0.70

Note ** denotes significance of a coefficient at the 1% level and * at the 5% level

TABLE 8

RESULTS OF REGRESSION ANALYSIS MIDDLE INCOME SAL COUNTRIES

REGRESSION COEFFICIENTS ON INDEPENDENT VARIABLES
(Student's T-statistics in brackets beneath co-efficient)

DEPENDENT VARIABLE (R squared in brackets)	CONSTANT	IMF(t)	SAL(t)	SAL (t-1)	SAL (t-2)	CI(t)	CI(t-1)	CI(t-2)	W(t)	TOT(t)	EPI(t)	INV(t)	gEX(t)	Durbin Watson Statistic
GDP growth 0.43	-23.94** (-3.73)	0.16 (0.59)	-0.21 (-0.30)	-2.86** (-3.26)	1.27 (1.57)	0 08 (0.18)	1.32* (2 47)	0.35 (0.70)	0.12** (3.23)	0.13* (2.44)	N/A	0.07 (1.00)	0.06* (2.45)	1.66
Export growth ((0.26)	-70.54** (-3.01)	-1.07 (-1.02)	-4.71 (-1 78)	-1.96 (-0.57)	2.33 (0.73)	4 54** (2.63)	-1.21 (-0.58)	1 58 (0.81)	0 23 (1.56)	N/A	0.72** (3.66)	-0.44 (-1.57)	N/A	2.03
Import growth (0 14)	-42 09 (-1.45)	0.17 (0.14)	-1.54 (-0.49)	-5.90 (-1.46)	3.60 (0 97)	2.79 (1.36)	-0.58 (0.24)	-1 95 (-0.86)	0.19 (1.17)	0.21 (0.88)	N/A	0.27 (0.85)	N/A	2.18
Investment as % of GDP (0 28)	-20.20* (-2.10)	0 05 (0.11)	-0 86 (-0.82)	0.37 (0.27)	-0 54 (-0.43)	0 15 (0 22)	0 95 (1.15)	-0.29 (-0 38)	0.09 (1.67)	0 36** (5.09)	N/A	N/A	N/A	0.80
Private Foreign Finance (0.20)	-2116.82 (-1.90)	-87 54 (-1.88)	-33 02 (-0 28)	-46 24 (-0.30)	-148 46 (-1 04)	-52 45 (-0 67)	5 20 (0 06)	86 09 (1.00)	12.00 (1.89)	13 00 (1.41)	N/A	17.22 (1.42)	N/A	0.91

Note ** denotes significance of a coefficient at the 1% level and * at the 5% level

independent variable in the equation which captures the effects of policy conditions attached to IMF stabilisation programmes. It should also be noted that we have not introduced any lags to the IMF finance variable and this may also explain the disappointing results.

Results concerning the effect of investment on GDP growth are also disappointing. The coefficient on the investment variable is close to zero and statistically insignificant for all three groups of countries. This result is undoubtedly due to the fact that we have not introduced lags to the investment variable. Similarly, growth of exports appears, surprisingly, to have little effect on the GDP growth rate, with the coefficient close to zero in all cases and possessing statistical significance, at the five per cent level, only in the case of the group containing all SAL countries (see the similar finding in Aghazadeh and Evans [*1988*]).

The estimation of the GDP growth rate equation produces strong results in terms of the impact of two exogenous independent variables, namely, weather and the terms of trade. For all three groups of countries, favourable weather and improvements in the terms of trade have a positive and statistically significant effect on GDP growth rates.

In summary, our estimation of the GDP growth rate equation indicates that compliance with policy conditions attached to Bank programme lending has a positive effect on GDP growth rates which emerges most strongly in the year after policy implementation, whilst the inflow of finance provided by the programme loans has an unexpected negative impact on GDP growth in the year following loan disbursement. When these two effects are taken together, the overall impact of programme lending on GDP growth rates is positive, but very weak, which is exactly the result which emerged from the tabular comparisons of section III above. In addition, two exogenous variables, weather and the terms of trade, were found to be important determinants of GDP growth. These results hold regardless of whether the SAL recipient is a Sub-Saharan country or a middle-income country.

Estimation of the *export growth rate* equation indicates that inflows of Bank finance in the current period, t, have a very strong negative effect on export growth for all three groups of countries, with the coefficient being statistically significant at the one per cent level for the group containing all SAL countries, and at the five per cent level for the Sub-Saharan group. However, the inflow of finance in the period $t-2$ has a positive effect on export growth rates for all three groups of countries, although none of the coefficients possess statistical significance. The strong, immediately negative response of exports to Bank finance again reinforces the view that the disbursement of programme aid finance, by reducing the immediate pressure to adjust to a balance of payments financing gap, may retard the recipient's pace of adjustment, hence resulting in a negative impact on variables such as GDP and export growth rates in the short term.

Compliance with Bank policy reform conditions in period t has a strong positive, and statistically significant, impact on export growth rates for all three groups of countries. This suggests that compliance with

Bank adjustment packages, most of which contain reforms designed to liberalise the trade regime, leads to an immediate and favourable export growth response.

However, this favourable result of compliance appears to be somewhat short-lived. For all three groups of countries compliance with Bank policy conditions in period t−1 has a negative impact on export growth rates which is statistically significant at the five per cent level for the group containing all SAL countries and the Sub-Saharan group and is very strong in the latter case. This lagged negative result may be explained by the findings of various country case studies [*Mosley, Harrigan and Toye, 1990· Vol. 2, Jamaica, Kenya, Philippines studies*], and the finding of section III, namely, that compliance with Bank policy reforms has an adverse negative effect on investment levels, acting in part through a general compression of imports, which may in turn give rise to a lagged negative impact on export growth rates

In summary, our results derived from the estimation of the export growth rate equation indicate that the inflow of Bank finance has a strong negative effect on export growth rates in the immediate period, but a positive lagged effect which emerges between one and two years later. By contrast, compliance with Bank policy conditions attached to this finance has a strong positive effect on exports in the immediate period but in the year following policy implementation we find a negative lagged effect on export growth which is particularly strong in the case of Sub-Saharan countries. Hence, taking the *net* impact of Bank programme loans, that is, loan finance plus loan conditions, we find that for all three groups of countries the net impact of loans on export growth in periods t to t−1 is negative, whilst the net impact of loans made available in period t−2 is positive.

Estimation of the *import growth rate* equation produced disappointing results, in that only three coefficients possessed statistical significance. For all three groups of countries we find an immediate negative impact of Bank finance on import growth rates, followed by a lagged positive effect, but none of the coefficients on the Bank finance variable possess statistical significance. This result is unexpected since it contradicts the expectation that the provision of hard-currency finance immediately relaxes the balance of payments constraint on imports.

Estimation of the *investment as a share of GDP* equation also provided few coefficients possessing statistical significance. One strong trend, however, does emerge. For all three groups of countries the provision of Bank finance and compliance with Bank policy conditions both have a two-year (t−2) lagged negative effect on investment. This result supports the findings of section III, namely, that the implementation of Bank adjustment packages has a lagged adverse effect on investment. It should be noted, however, that none of the coefficients on either the compliance or Bank finance variables possess statistical significance, and in all cases the coefficient values are low such that the effects are weak. The regressions, therefore, did not provide us with the robust result we had expected in view of the strength of evidence elsewhere suggesting a

negative correlation between Bank programme lending and investment levels (section III); see also Mosley, Harrigan and Toye [*1990. Vol. 2, Jamaica, Kenya and Philippines country studies: Mosley and Smith, 1988*].

The provision of IMF finance, and the associated stabilisation conditions, appear to have no effect on investment, although again, this neutral result may be due to the fact that we have not introduced lags to the IMF variable. For all three groups of countries, improvements in the terms of trade have a positive and statistically significant impact on investment as a share of GDP, whilst effects of weather improvements are close to being neutral and are statistically insignificant.

Finally, estimation of the determinants of inflows of *foreign private finance* produced virtually no statistically significant results. For all three groups of countries, the provision of Bank SAL and SECAL finance has a negative effect on flows of foreign private finance (with the exception of Bank finance in period t−2 for Sub-Saharan countries, where a positive effect occurs). Compliance with Bank policy conditions has varying effects on the inflow of foreign private finance according to country type. Taking the net effect of Bank programme lending (that is, Bank finance plus Bank policy conditions), only in the case of Sub-Saharan countries do we find any evidence of a positive net impact of such lending on the inflow of foreign private finance. This is a disappointing result, since the stimulation of foreign commercial finance in support of adjustment and stabilisation programmes has often been proposed by the architects of such programmes as an anticipated beneficial effect on their reform packages. The claim that the Bank and the Fund could rekindle international capital flows to developing countries by placing a seal of approval on selected LDC governments [*Taylor, 1988*] has, so far, proved to be unfounded.

In addition to the specific results for each regression equation reported above, the regression work has indicated an important general trend regarding the impact of Bank programme lending. The break-down of programme aid into its two components, namely, loan finance and loan conditions, has highlighted an important contrast in the impact of the two components. The regression results indicate that the provision of loan finance has an *immediate negative* short-term impact on many of the dependent variables – exports, GDP and foreign finance – whereas compliance with the conditions attached to this finance has a *lagged favourable* effect on GDP and on curbing imports. Hence, we appear to have isolated, at the aggregate level, an important contrast and conflict between the nature and speed of the impact of loan finance and that of loan conditions, with the former having an immediate negative impact on certain macro variables and the latter a lagged positive impact on certain macro variables. The impact of the two components of programme aid therefore pull in opposite directions in a way which highlights an inherent potential conflict contained within programme lending. The provision of loan finance, by easing a country's balance of payments constraint, may well reduce the immediate pressure to adjust and hence retard the pace of adjustment reform and make the policy conditions attached to such

finance harder to achieve. This 'disbursement dilemma' indicates that the traditional view of the interaction between loan finance and loan conditions, whereby the provision of finance is seen as a leverage mechanism to entice the recipient to implement adjustment reforms, is misplaced and in need of reappraisal.

The regression work has also enabled us to introduce lags to both the Bank finance variable and the compliance variable and as such helps us to address the issue of causation. The fact that the finance and compliance variables have clear, and often statistically significant, lagged impacts on our chosen criteria of evaluation enables us to infer, using the criterion of 'precedence' [*Maddala, 1988: 325–31*] that the direction of causation runs from programme aid to the independent variables, rather than vice versa.

V CONCLUSIONS

We are now in a position to summarise the results we have obtained in our evaluation of World Bank programme finance. Table 9 sets out the influence of structural adjustment lending on various indicators as estimated by each of the approaches covered in this study. It is encouraging to note that the results obtained from the different evaluation exercises are remarkably consistent with each other.

Taken as a whole, the sample of SAL countries does not exhibit any significant influence of programme aid on GDP growth rates. The tabular comparisons of section III indicate a very weak positive effect only when 1982–86 is defined as the SAL period, whilst the section IV regression results provide evidence of a very weak, but in most cases statistically insignificant, net positive impact of Bank adjustment packages, that is, finance plus conditions. However, whereas the section III analysis led us to speculate that this weak positive effect was due to loan finance rather than loan conditions, our regression work clearly indicates that compliance with Bank policy reforms is the main contributor to the small beneficial impact on GDP growth. Our regression results also indicate that an anticipated indirect benefit of programme aid, namely, leverage on inward flows of private foreign finance in response to a policy environment favourable to private enterprise, has failed to materialise.

In addition to the disappointing impact on GDP growth rates, our results have indicated an alarming trend in terms of the effect of Bank programme aid on investment and hence possibly on future growth. A strong negative correlation between SAL packages and investment emerged from the tabular comparisons of section III, whilst the regression results for the investment equation indicate that both the provision of SAL and SECAL finance and compliance with attached policy conditions have a two-period lagged negative effect on investment as a share of GDP. However, we are disappointed that the regression work did not produce more robust results in the form of statistically significant coefficients.

Our results suggest that Bank programme aid has had a marked beneficial effect on the balance of payments current account, both via the stimulation of exports and via the curbing of imports. The regression

TABLE 9
SUMMARY OF RESULTS

INDICATORS	Real GDP Growth	Real Export Growth	Investment	Balance of Payments	Foreign Finance
METHODS					
1. Tabular Comparisons with Control.					
This Study	NEUTRAL/ WEAK +VE	+VE	-VE	+VE	N/A
World Bank (1988b, 1990)	NEUTRAL	+VE	-VE	+VE	N/A
2. Multiple Regressions	WEAK +VE	+VE	-VE	+VE	NEUTRAL

results for the determinants of export growth showed a positive net impact of adjustment packages on export growth rates. However, this impact takes at least two years to materialise, with effects in the year of loan disbursement and in the year following disbursement being negative. The two-year lagged positive response appears to be the combined result of the impact of both Bank finance and Bank policy conditions and supports the favourable export results obtained in section III. Estimation of the import growth rate equation in section IV also provided some evidence for a lagged negative effect of compliance with Bank policy conditions which is again consistent with our section III results.

The rate of return on World Bank programme aid, when measured in terms of the impact of GDP growth rates, appears therefore, on the available evidence, to be insignificant in the aggregate. This contrasts with the average rate of return on aid-financed development projects, for example, the 17 per cent achieved on World Bank development projects between 1960 and 1980 [*World Bank, 1983*].[9] It also contrasts with the expectations originally held concerning the effects of such programme assistance by World Bank staff[10] and the model-based findings on the effects of adjustment programmes forwarded by Genberg and Swoboda [*1985*]. Indeed, it is only in terms of an improvement in the balance of payments current account, brought about by both stimulation of exports and curbing of imports, that our aggregative evaluation of World Bank programme aid has indicated an unambiguously favourable impact.

We must add to our disappointing results the fact that the adverse investment effects of programme aid which we have observed will most likely continue to have a depressing effect on GDP growth in years to come. Also to be added is the weight of the evidence now accumulating [*Cornia, Jolly and Stewart, 1987*] which indicates strong adverse effects of adjustment as a whole on distributional and social welfare indicators.

None of the above suggests that World Bank programme aid, or any

other form of programme aid, will always produce disappointing outcomes. We have found considerable diversity within the aggregated group of countries studied, with several countries benefiting considerably, in terms of macroeconomic performance, from the receipt of World Bank programme finance. What it does suggest, however, is that European governments and aid agencies who, in contrast to some of their counterparts in the Americas, have to date generally shown greater scepticism towards policy-based lending as an instrument of development should continue to exercise caution and discretion in their shift to the programme lending mode.

NOTES

1 We shall use the terms 'programme aid', 'programme loans', 'donors' and 'lenders' interchangeably since some programme assistance is provided on a loan basis, for example, in the case of bilateral agencies and IDA World Bank money For an evaluation of the distributional impact of structural adjustment programmes readers are referred to the work by Addison and Demery [*1987*]

2 It has been suggested that countries which receive SALs have stronger economies than others [*Mosley, 1987 27–8*] Non-random programme-aid country selection has also been shown to exist in the case of countries receiving IMF adjustment packages In the period immediately prior to the implementation of IMF programmes, recipient countries systematically differed from non-recipients by having, on average, larger balance of payments and current account deficits as a proportion of GNP, lower rates of real output growth, and higher inflation rates [*Goldstein, 1986 Table 4*]

3. None of the Bank's SAL operations up to the end of fiscal year 1987, and only three of its 70 SECAL operations, were initiated without an IMF stabilisation agreement having been signed beforehand More recently, in September 1988, a large US$500 million Bank policy-based lending package was assembled for Argentina without prior agreement between the Argentina Government and the IMF

4 A fuller discussion of the causation issue in relation to the evaluation of World Bank programme lending can be found in Mosley, Harrigan and Toye [*1990 Ch 8*]

5 The full data-set for these other variables and notes on the statistical definitions and derivations can be found in Mosley, Harrigan and Toye [*1990· Ch 6*] Certain SAL countries appear in the GDP growth rate table but not in subsequent tables They are excluded from the latter, along with the relevant paired Non-SAL control group country, due to lack of data availability In all tables, the following SAL countries, along with the paired control country in brackets, are excluded from the 1979–81 and 1982–86 comparisons due to the fact that their first SAL was received in 1985 or later

Burundi	(Rwanda)
Chile	(Peru)
Costa Rica	(Honduras)
Ghana	(Zambia)
Nepal	(Burma)
Niger	(Mauritania)

6 The Bank, in an internal review of the SAL experience [*World Bank, 1986 Table 3 1*] takes ten countries who have received SALs and ascribes a SAL policy implementation rating to each, using the following scale·

1 – negligible
2 – fell short of expectations
3 – largely successful

Within the group, Cote d'Ivoire, Jamaica, Thailand and Turkey were the only countries

awarded a 3 rating Hence, these countries are included in our low slippage SAL group The other countries included in our group, namely Chile, Ghana, Malawi and Togo, were not covered in the above Bank report We have classified them as low slippage on the basis of research carried out by one of the authors elsewhere [*Mosley, 1985 and 1987*]

7 In addition it has been suggested by Rodrik [*1989*] and World Bank [*1990· Ch 6*] that uncertainty concerning whether reforms will be *sustained* – well founded in the case of a number of SAL recipient countries – may deter private investors from any immediate positive response to a Fund- or Bank-inspired reform programme

8 Where the compliance coefficient (CI) and the Bank finance coefficient (SAL) possess the same sign for a given time period we can unambiguously categorise the net impact as positive or negative in accordance with these signs Where the two coefficients possess opposite signs we have tentatively ascribed the sign of the larger of the two coefficients to the net effect.

9. This comparison between returns to programme aid and returns to project aid must be qualified by an acknowledgement of the conceptual problems which beset such a comparison It is impossible to calculate a rate of return to programme aid in the same way that internal rates of return are calculated for individual donor-funded projects This is due to difficulties in identifying and quantifying externalities in the case of programme aid Indeed, one important externality (and a driving force behind the Bank's move towards programme lending) is the anticipated increase in rates of return to projects *brought about* by improvements to the macro-environment as a result of programme lending

10 See, for example, Stern [*1983*] and the predictions contained in various ex-ante appraisals of World Bank Structural Adjustment Loans and summarised in Mosley [*1987 Table 4*]

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